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Please find below and/or attached an Office communication concerning this application or proceeding.

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DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S. C. 121:

I. Claims 1-8, 11-20, and 44-46 are drawn to an isolated nucleic acid molecule, comprising a sequence of nucleotides that encodes a polypeptide as set forth in SEQ ID No: 2 except that the IIe residue at position 646 is replaced, vectors comprising the nucleic acid of claim 1, and host cells comprising the vector or variants of nucleic acid of claim 1; claims are further drawn to complementary oligonucleotides (primer, probe or antisense) to the polynucleotide of claim 1. Classified in class 536, subclass 23.1, and class 435, subclass 320.1, and 455.

II. Claim 21-31 are drawn to a method for detecting the presence or absence of an allelic variant of a human AKAP10 gene, comprising determining the identity of the nucleotide at a position adjacent to a position corresponding to position 2073 of SEQ ID No: 1, , wherein the variant has a nucleotide other than A at position 2073. Classified in class 536, subclass 6.

III. Claim 21, 32-37 are drawn to a method for detecting the presence or absence of an allelic variant of a human AKAP10 gene, comprising determining the identity of the nucleotide at a position corresponding to position 2073 of SEQ ID No: 1, wherein the variant has a nucleotide other than A at position 2073. Classified in class 536, subclass 6.

IV. Claim 38-43 are drawn to a method for indicating susceptibility to morbidity comprising detecting the presence or absence of at least one allelic variant of a polymorphic region of a human AKAP10 gene consisting of a position corresponding to position 83587 of SEQ ID No: 13. Classified in class 536, subclass 6.

V. Claim 38-43 are drawn to a method for indicating susceptibility to morbidity comprising detecting the presence or absence of at least one allelic variant of a polymorphic region of a human AKAP10 gene consisting of a position corresponding to position 129,600 of SEQ ID No: 14. Classified in class 536, subclass 6.

VI. Claim 38-43 are drawn to a method for indicating susceptibility to morbidity comprising detecting the presence or absence of at least one allelic variant of a polymorphic region of a human AKAP10 gene consisting of a position corresponding to position 156,277 of SEQ ID No: 18. Classified in class 536, subclass 6.

VII. Claims 47-50 are drawn to a kit comprising a first primer that specifically hybridizes adjacent to or at a polymorphic region spanning a position corresponding to position 2073 of SEQ ID No: 1 or 3, and a second primer specifically hybridizes adjacent to a polymorphic region consisting of a position corresponding to position 83587 of SEQ ID No: 13 or 17. Classified in class 536, subclass 24.31.

VIII. Claims 47-50 are drawn to a kit comprising a first primer that specifically hybridizes adjacent to or at a polymorphic region spanning a position corresponding to position 2073 of SEQ ID No: 1 or 3, and a second primer specifically hybridizes adjacent to a polymorphic region consisting of a position corresponding to position 129,600 of SEQ ID No: 14 or 17. Classified in class 536, subclass 24.31.

IX. Claims 47-50 are drawn to a kit comprising a first primer that specifically hybridizes adjacent to or at a polymorphic region spanning a position corresponding to position 2073 of SEQ ID No: 1 or 3, and a second primer specifically hybridizes adjacent to a polymorphic region consisting of a position corresponding to position 156,277 of SEQ ID No: 18 or 17. Classified in class 536, subclass 24.31.

X. Claims 9, 10, 51-54 are drawn to a method for producing a protein by growing a host cell comprising a vector comprising nucleotides that encodes a polypeptide as set forth in SEQ ID No: 2 except that the IIe residue at position 646 is replaced, and protein produced by the method. Classified in class 435, subclass 69.1.

XI. Claims 55 and 56 are drawn to a transgenic animal comprising heterologous nucleic acid encoding a human AKAP10 variant protein that comprises valine at a position corresponding to amino acid residue position 646 of SEQ ID No: 2. Classified in class 800, subclass 13.

XII. Claims 57-60 are drawn to a method for identifying a molecule that modulates the biological activity of an AKAP10 protein. Classified in class 435, subclass 375.

XIII. Claims 61-68 are drawn to a method for indicating an alteration in signal transduction in a subject, comprising detecting the presence or absence of an allelic variant of an AKAP10 gene having a nucleotide other than A at a position corresponding to position 2073 of SEQ ID No:1, and further comprising a polymorphic region of a human AKAP10 gene consisting of a position corresponding to position 83587 of SEQ ID No: 13. Classified in class 435, subclass 6.

XIV. Claims 61-68 are drawn to a method for indicating an alteration in signal transduction in a subject, comprising detecting the presence or absence of an allelic variant of an AKAP10 gene having a nucleotide other than A at a position corresponding to position 2073 of SEQ ID No:1, and further comprising a polymorphic region of a human AKAP10 gene consisting of a position corresponding to position 129,600 of SEQ ID No: 14. Classified in class 435, subclass 6.

XV. Claims 61-68 are drawn to a method for indicating an alteration in signal transduction in a subject, comprising detecting the presence or absence of an allelic variant of an AKAP10 gene having a nucleotide other than A at a position corresponding to position 2073 of SEQ ID No:1, and further comprising a polymorphic region of a human AKAP10 gene consisting of a position corresponding to position 156,277 of SEQ ID No: 18. Classified in class 435, subclass 6.

XVI. Claims 69-71 are drawn to a solid support comprising a nucleic acid comprising a polymorphic region of an AKAP10 gene having a nucleotide other than A at a position corresponding to position 2073 of SEQ ID No:1, and further comprising a polymorphic region of a human AKAP10 gene consisting of a position corresponding to position 83587 of SEQ ID No: 13. Classified in class 435, subclass 287.2.

XVII. Claims 69-71 are drawn to a solid support comprising a nucleic acid comprising a polymorphic region of an AKAP10 gene having a nucleotide other than A at a position corresponding to position 2073 of SEQ ID No:1, and further comprising a polymorphic region of a human AKAP10 gene consisting of a position corresponding to position 129,600 of SEQ ID No: 14. Classified in class 435, subclass 287.2.

XVIII. Claims 69-71 are drawn to a solid support comprising a nucleic acid comprising a polymorphic region of an AKAP10 gene having a nucleotide other than A at a position corresponding to position 2073 of SEQ ID No:1, and further comprising a polymorphic region of a human AKAP10 gene consisting of a position corresponding to position 156,277 of SEQ ID No: 18. Classified in class 435, subclass 287.2.

XIX. Claims 72-74 are drawn to an anti-AKAP10 ribozyme comprising a sequence complementary to a polymorphic region of an AKAP10 gene, wherein the polymorphic region consisting of a position corresponding to position 2073 of SEQ ID No: 3. Classified in class 536, subclass 24.5.

XX. Claims 72-74 are drawn to an anti-AKAP10 ribozyme comprising a sequence complementary to a polymorphic region of an AKAP10 gene, wherein the polymorphic region consisting of a position corresponding to position 83587 of SEQ ID No: 13. Classified in class 536, subclass 24.5.

XXI. Claims 72-74 are drawn to an anti-AKAP10 ribozyme comprising a sequence complementary to a polymorphic region of an AKAP10 gene, wherein the polymorphic region consisting of a position corresponding to position 129,600 of SEQ ID No: 14. Classified in class 536, subclass 24.5.

XXII. Claims 72-74 are drawn to an anti-AKAP10 ribozyme comprising a sequence complementary to a polymorphic region of an AKAP10 gene, wherein the polymorphic region consisting of a position corresponding to position 15,277 of SEQ ID No: 18. Classified in class 536, subclass 24.5.

XXIII. Claim 75 is drawn to a primer consisting essentially of nucleotide sequence SEQ ID No: 8. Classified in class 536, subclass 24.33.

XXIV. Claim 75 is drawn to a primer consisting essentially of nucleotide sequence SEQ ID No: 15. Classified in class 536, subclass 24.33.

XXV. Claim 75 is drawn to a primer consisting essentially of nucleotide sequence SEQ ID No: 19. Classified in class 536, subclass 24.33.

XXVI. Claim 75 is drawn to a primer consisting essentially of nucleotide sequence SEQ ID No: 20. Classified in class 536, subclass 24.33.

2. The inventions are distinct, each from the other because of the following reasons.

Inventions VII-XI, XVI-XXVI and I are independent and distinct inventions. Inventions are distinct if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, each of the groups I, VII-IX, XI, XVI-XXVI are drawn to a different product, i.e. different nucleic acids, proteins, ribozymes, primer and probes, apparatus for assay, assay kits, and transgenic animals. The different products have distinct structures and sequences, and distinct function. The different products have different modes of operation, and require distinct technical considerations.

Inventions III-VI, X, XII-XV, and II are independent and distinct inventions. Inventions are distinct if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, groups II-VI, X, and XII-XV are drawn to different methods for

detecting an allelic variant of AKAP10 gene, for indicating susceptibility to morbidity, for production of protein, and screening for compound. Each of the groups differs in targeting strategy, in the starting material used in the process, or method steps. The different methods have different method steps, different modes of operation, and require distinct technical considerations.

Inventions XIII-XV and VII-IX could be related as product and process of use, respectively. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the kits could be used for other process such as DNA amplification.

The differences of the Inventions I-XV are further underscored by their divergent classification and independent search criteria.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and different search criteria, it would impose an undue burden to the Office if all the groups are examined together, thus, restriction for examination purposes as indicated is proper.

3. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is advised that where a single claim encompasses more than one invention as defined above, upon election of an invention for examination, said claim will only be examined to the extent that it reads upon the elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Q. Janice Li whose telephone number is 703-308-7942. The examiner can normally be reached on 8:30 am - 5 p.m., Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah J. Clark can be reached on 703-305-4051. The fax numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of formal matters can be directed to the patent analyst, Dianiece Jacobs, whose telephone number is (703) 305-3388.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235. The faxing of

such papers must conform to the notice published in the Official Gazette 1096 OG 30

(November 15, 1989).

Q. Janice Li
Examiner
Art Unit 1632

QJL
June 12, 2002

JAMES KETTER
PRIMARY EXAMINER